CLAIMS

1. A probehead for measuring nuclear magnetic resonance that is comprised of a frame, a radio frequency coil attached thereto and a rotor located inside the coil containing the examined sample, supported by bearings and provided with turbines at both ends, a source of compressed gas, an executive unit and a control unit, **characterized in that** different turbines make the rotor rotate in the same or in opposite directions and the executive unit is provided at least two separate compressed gas channels for rotor velocity control for each turbine.

2. A probehead as claimed in claim 1 **characterized in that** at both ends of the rotor there are two turbines respectively to provide rotation in opposite directions and the executive unit has been provided with four compressed gas channels for rotor velocity control.

3. A probehead as claimed in claim 1 **characterized in that** the turbines are cylindrical and the diameter of their work area is less than the diameter of the rotor.

4. A probehead as claimed in claim 1 **characterized in that** the coil is connected to the inner surface of the frame with at least two, preferably four sheets of thin non-conductive and non-magnetic material.

5. A probehead as claimed in claim 4 **characterized in that** the sheets are made of ceramic material.

6. A probehead as claimed in claim 4 **characterized in that** the coil ends of the sheets comprise grooves for housing coil sections.

7. A probehead as claimed in claim 4 **characterized in that** the ratio of the length and thickness of the sheets is 200:1 to 50:1.